



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,178	12/06/2000	Steven D. Goedeke	P-8896	9273

27581 7590 04/10/2003

MEDTRONIC, INC.
710 MEDTRONIC PARKWAY NE
MS-LC340
MINNEAPOLIS, MN 55432-5604

EXAMINER

SMITS, TALIVALDIS IVARS

ART UNIT	PAPER NUMBER
----------	--------------

2654

DATE MAILED: 04/10/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/731,178

Applicant(s)
Steven D. Goedeke et al.

Examiner
Talivaldis Ivars Smits

Art Unit
2654



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5 6) ☐ Other:

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

2. The disclosure is objected to because of the following informalities: The listing of related applications added in the Preliminary Amendment should be moved to line 9 of the first page of the Specification, and the list should be updated to indicate Patent Numbers of issued applications. For example, the first three applications listed therein should be identified as U.S. Patents 6,298,271, 6,250,309, and 6,442,433, respectively..

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffery D. Snell (U.S. Patent 5,792,204, issued August 11, 1998).

As per claims 1, 4-6, 9, 19, 20, 26, and 30, Snell teaches a system interfacing with an implanted medical device (col. 3, lines 61-65), with:

- microphone input of a voice command to a speech recognizer (col. 3, lines 5-7);
- the speech recognizer matching the input voice command to the subset of commands and converting the recognized voice command into a selection code (control program instructions, col. 4, line 5),
- said commands along with a set of control signals being stored in memory (col. 5, line 67 thru col. 6, line 2; col. 4, lines 5-6), and
- generating a control signal therefrom to execute the commands (col. 3, lines 9-13; col. 5, lines 4-6);
- a display device (col. 4, line 62); and
- displaying received data generated by the implanted medical device in response to the execution of the command as well as implanted medical device state data (col. 4, lines 62-65 and col. 5, lines 3-13).

Snell does not explicitly teach displaying the selectable subset of commands as a function of the device. However, the examiner takes Official Notice that it is old and notoriously well known to have context-sensitive commands, and to display them for user selection by voice (or, of course, by keyboard or mouse) from a displayed menu. It would have been obvious for an artisan at the time of invention to display the available commands to avoid wasting user time by

having her remember the precise available command words.

As per claims 2, 3, 23, and 29, Snell does not specifically teach a bandpass amplifier to reject ambient background signals from the microphone. However, the examiner takes Official Notice that it is old and notoriously well-known to bandpass-filter microphone audio input for speech recognizers to confine the bandwidth to the speech band. It would have been obvious for an artisan at the time of invention to do this to reduce extraneous noise, particularly broadband impulsive noise, coming from outside the speech band and causing speech recognizer errors.

As per claim 7, Snell teaches a pacing system analyzer (col. 4, lines 26-27 and 39).

As per claim 8, Snell teaches a programming unit adapted to interrogate and program the implanted medical device (col. 4, lines 62-64 and col. 5, lines 14-19).

As per claims 10-12, Snell does not explicitly teach an unidirectional microphone to be steered by the user of his medical data processing instrument. However, the examiner takes Official Notice that it is old and notoriously well-known to have a unidirectional microphone steerable by the user to input voice commands (or other speech) to a speech recognizer. It would have been obvious for an artisan at the time of invention to thus use a unidirectional microphone to conveniently spatially filter out noise coming from different directions than the user location.

As per claims 13, 24, and 27, Snell teaches adapting or configuring the speech recognizer and the processor for new commands or to a new user generating appropriate recognition data, to be stored in the memory arrangement (stored replaced command instructions and data to be used therefor, respectively, col. 5, lines 14-19 and col. 6, lines 6-9).

As per claims 14, 25, and 28, Snell does not teach validating the user to limit the various levels of commands that a user is authorized to give. However, the examiner takes Official Notice, that it is notoriously well-known in speech recognizer applications involving safety and security considerations (not to mention proprietary data or other privacy concerns) to validate the user before giving access to the corresponding command or data levels. Therefore it would have been obvious for an artisan at the time of invention to include such a user validation feature in the processor, to prevent unqualified users from endangering the patient by misusing the implanted medical device (*cf.* col. 6, lines 56-58) or misappropriating her private data (*cf.* col. 5, lines 19-21).

As per claims 15-17 and 22, Snell teaches an audio signal confirming the receipt of a voice selected command or device state to inform the user or for user confirmation (col. 6, lines 61-64; col. 7, lines 4-14 and 58-62; for suggestion of similarly outputting device state *cf.* col. 5, lines 7-9).

As per claim 18, Snell teaches medical data processing from the implantable device via a

communications network (col. 5, lines 41-47).

As per claim 21, Snell teaches validating the stored command speech sets to see whether the voice command is understood (col. 9, lines 6-14).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Robert Stadler *et al.* (U.S. Patent 6,115,628, filed March 29, 1999 by same assignee) teaches speech commands for implantable medical devices). Arthur Brant *et al.* (U.S. Patent 5,970,457, issued October 19, 1999, and U.S. Patent 6,278,975, filed August 19, 1999) teach voice commands for medical care devices. William H. L. Chang *et al.* (U.S. Patent 6,224,542, filed January 4, 1999) teach a voice-controlled endoscopic camera system.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or FAXed to:

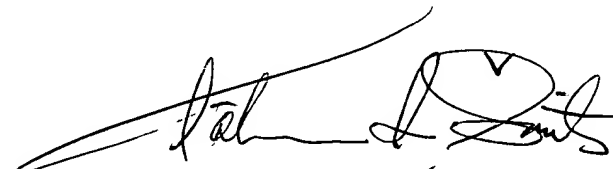
(703) 872-9314 (please label *formal* communications
"OFFICIAL"; please label *informal* or draft communications,
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Talivaldis Ivars Smits, whose telephone number is (703) 306-3011. The examiner can normally be reached Mondays-Fridays from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold, can be reached on (703) 305-4379. The facsimile phone number for Technology Center 2600 is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 2600 customer service, whose telephone number is (703) 306-0377.



TĀLIVALDIS IVARS ŠMITS
PRIMARY EXAMINER

Art Unit 2654
April 7, 2003